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| 10/784,600 | 02/23/2004 | William A. Pugh | BEAS-1411US2 | 1885 |

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| EXAMINER | |
|---|---|
| STEELMAN, MARY J | |
| **ART UNIT** | **PAPER NUMBER** |
| 2191 | |

| SHORTENED STATUTORY PERIOD OF RESPONSE | MAIL DATE | DELIVERY MODE |
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

| Office Action Summary | Application No. | Applicant(s) | |
|---|---|---|---|
| | 10/784,600 | PUGH ET AL. | |
| | Examiner | Art Unit | |
| | Mary J. Steelman | 2191 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on *12 December 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *4-9* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *4-9* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *12/12/2006*. NOT CONSIDERED
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

## DETAILED ACTION

1. This Office Action is in response to Amendments and Remarks received 12/12/2006. Per Applicant's request, claims 1-3 have been cancelled. New claims 4-9 have been added. The Specification has been amended. The Abstract has been amended. Claims 4-9 are pending.

### *Information Disclosure Statement*

2. IDS received 12/12/2006 has not been considered. The information disclosure statement filed 12/12/2006 fails to comply with 37 CFR 1.97(c) because it lacks a statement as specified in 37 CFR 1.97(e). It has been placed in the application file, but the information referred to therein has not been considered.

### *Specification*

3. The use of the trademark JAVA has been noted in this application. It should be capitalized wherever it appears and be accompanied by the generic terminology.

Although the use of trademarks is permissible in patent applications, the proprietary nature of the marks should be respected and every effort made to prevent their use in any manner which might adversely affect their validity as trademarks.

### *Claim Objections*

4. Claim 5 is unclear to Examiner. Step b recites 'if'. Step c recites processing as described in step (b). Does that mean step c happens only 'if' step b is true? If the multi-language debugger does not encounter a class..., does step c, "creating a stack frame list" still happen?

Step d, the multi-language debugger then proceeds to discover and inspect variables in the same way as before (in what same way?).

Claim 7 is unclear. "-wherein the multi-language debugger steps through code and informs the script debug controller when a step is about to begin." Does this mean when a basic block is to be entered? Does this mean each 'step' of the debugger step? Dose this mean step a, b, c, or d, of claim 5?

***Double Patenting***

5. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting

ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

6. Newly added claims 4-9 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-5 of copending Application No. 10/784559. Although the conflicting claims are not identical, they are not patentably distinct from each other because both sets of claims address debugging of multiple language applications, an interface for a debugging frame for each language, and editor of each language, and executable object codes.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

***Claim Rejections - 35 USC § 101***

7. Newly added claims 4-9 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Claim 4 recites such limitations as "allowing a user to edit...", "providing the capability...", "providing the ability...".

The claimed subject matter lacks a practical application of a judicial exception (law of nature, abstract idea, naturally occurring article / phenomenon) since it fails to produce a useful, concrete, tangible result.

Claim may be amended to recite:

'comprising: debugging ...editing...interpreting...displaying...', thereby providing a useful, concrete, tangible result.

***Claim Rejections - 35 USC § 112***

8. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

9. Newly added claims 4-8 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

See MPEP 7.35.01 Trademark or Trade Name as a Limitation in the Claim

Claims 4 and 8 contain the trademark/trade name JAVA (Java Debugging Interface, JavaScript). Where a trademark or trade name is used in a claim as a limitation to identify or describe a particular material or product, the claim does not comply with the requirements of 35 U.S.C. 112, second paragraph. See Ex parte Simpson, 218 USPQ 1020 (Bd. App. 1982). The claim scope is uncertain since the trademark or trade name cannot be used properly to identify any particular material or product. A trademark or trade name is used to identify a source of goods, and not the goods themselves. Thus, a trademark or trade name does not identify or describe the goods associated with the trademark or trade name. In the present case, the trademark/trade

name is used to identify/describe byte code programming language and, accordingly, the identification/description is indefinite.

The trademark JAVA is improperly relied upon in the claims to incorporate the technical features of a particular programming language environment. However, the trademark JAVA can only properly define the source of the programming language environment, namely Sun Microsystems, Inc. Accordingly, the identification/description is indefinite.

Sun Microsystems, Inc. is the sole producer and/or licenser of JAVA products. The trademark JAVA identifies the source of the products and not the products themselves. In contrast, for example, C++ is a name used in trade to identify a particular nonproprietary programming language conforming to an accepted standard. Products and services incorporating the name C++ are produced by numerous sources. Further, the technologies identified using the trademark JAVA are continuously evolving. An example of this evolution can be found in "JSR 14: Add Generic Types To The Java™ Programming Language", which describes a proposed amendment to the JAVA Language Specification submitted by Sun Microsystems, Inc., in 1999 and pending approval by the JAVA COMMUNITY PROCESS Program. In view of the statements presented above, it is asserted that the trademark JAVA has no fixed definite technical meaning. Accordingly, a rejection under 35 U.S.C. 112, second paragraph, based on the use of the trademark JAVA as a limitation in a claim, is proper.

10. Claims 5 and 6 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

11. Claim 5 recites the limitations "the first breakpoint", "the current class, line, and stack", "the context", "the contents of the stack", "proceeds to discover and inspect variables in the same way as before." Claim 6 recites the limitations "the current stack frame", "the values", "the script variables". There is insufficient antecedent basis for these limitations in the claim.

***Response to Arguments***

12. Applicant's arguments filed 12/12/206 have been fully considered but they are not persuasive. Applicant has argued (page 7, 2nd paragraph) that Bogle does not disclose the limitation that all communications with the script engine will be through Java Debugging Interface calls to a script debug controller.

Examiner's Response: As noted in the 112 2nd paragraph rejection above, where a trademark or trade name is used in a claim as a limitation to identify or describe a particular material or product, the claim does not comply with the requirements of 35 U.S.C. 112, second paragraph. See Ex parte Simpson, 218 USPQ 1020 (Bd. App. 1982). The claim will be examined to in light of a script engine communicating through (byte code) interface calls to a script debug controller.

***Claim Rejections - 35 USC § 102***

13. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

14. Claims 4-9 are rejected under 35 U.S.C. 102(e) as being anticipated by US Patent 6,353,923 B1 to Bogle et al.

Per claim 4:

A method for debugging in more than one programming language with a multi-language debugger, comprising:

providing an interface with a debugging frame for each language;

Bogle: col. 8: 1, multiple interfaces col. 10: 65, debug interfaces

allowing a user to edit each language in a debugging frame;

Bogle: FIG. 5, #538, Accommodate Dynamic Changes to Run Time Script, #550, Perform Debugging Operations Col. 3: 20-25, interpreted programming language code...active debugging environment...a mixture of interpreted programming languages exist within the application being debugged. Col. 4: 10-13, debugging a multiple language application Col. 10: 60, editing.

providing the capability to interpret multiple languages within a single source file and allow each of the multiple languages to be displayed in a debugging frame;

Bogle: Col. 3: 21, interpreted Col. 10: 57-64, debugging frame (various views / watch windows) Col. 11: 22-37, Machine Debug Manager maintains a list of active virtual applications and is a central interface between the IDE and the active script components...A virtual

application is the aggregate of multiple applications in multiple programming languages (ability to interpret multiple languages).

providing the ability to support additional languages;

Bogle: Col. 11: 62, language engine supports a specific language implementation.

wherein the multi-language debugger uses a standardize interface for a script engine and all communications with the script engine will be through Java Debugging Interface calls to a script debug controller.

Bogle: Col. 12: 5-20, As an example, Bogle disclosed a script host as an Internet browser (virtual machine). JAVA is disclosed at col. 12: 28. Col. 59: 58, The primary interface provided by a debugger IDE to enable host and language initiated debugging. Col. 65: 49, Javascript

Per claim 5:

wherein the first breakpoint behaves like a normal break and then the following process is performed, comprising the steps of:

Bogle: Col. 11:58, coordinating breakpoints Col. 13: 50-67. Col. 65: 59, breakpoint

a. the multi-language debugger receives the current class, line, and stack, and processes the stack through a language filter;

Bogle: Col. 14: 24-29 Col. 51: 66, returns the line number Col. 52: 43, creates a document context object . Col. 61: 34, Bring the window containing the given doc context to the front, and scroll it to the correct location. Col. 66: 41, stack frame sniffer

b. if the multi-language debugger encounters a class that implements a script language, the debug script controller will obtain the context and the contents of the stack;

Bogle: Col. 37:57, state (context) Col. 39: 58, Breakpoint state

c. script languages are processed as described in step (b), creating a stack frame list to send back to the multi-language debugger;

Bogle: Col. 49: 49, stack frame Col. 50: 7, enumerate the stack frames Col. 20: 51, retrieves the current state of the scripting engine.

d. the multi-language debugger then proceeds to discover and inspect variables in the same way as before.

Bogle: Col. 10: 62, requesting expression evaluation and watch windows, and browsing stack frames, objects, classes and application source code. As an example, col. 65: 7-8, Returns an enumerator that lists the global expression contexts for all languages running in this application.

Per claim 6:

-wherein the current stack frame is set to a frame controlled by a script engine, further comprising the steps of:

Bogle: Col. 7: 23, Expression Context A context of a resource, such as a stack frame in which expressions may be evaluated by a language engine.

a. creating a list of variables for the current stack frame;

Bogle: Col. 10: 62, requesting expression evaluation and watch windows, and browsing stack frames, objects, classes and application source code.

b. obtaining the values of the script variables through method invocations.

Bogle: Col. 10: 62, requesting expression evaluation and watch windows (values of the script variables), and browsing stack frames, objects, classes and application source code.
As an example, col. 65: 7-8, Returns an enumerator that lists the global expression contexts for all languages running in this application.

Per claim 7:

-wherein the multi-language debugger steps through code and informs the script debug controller when a step is about to begin.

Bogle: Col. 10: 57-64, real time document and / or application editing Col. 65: 35, single step mode Col. 13: 62-67, stepwise code execution can be set

Per claim 8:

-wherein the script engine supports JavaScript.

Bogle: See 112 2nd paragraph rejection above. Col. 12: 5-20, As an example, Bogle disclosed a script host as an Internet browser (virtual machine). JAVA is disclosed at col. 12: 28. Col. 59: 58, The primary interface provided by a debugger IDE to enable host and language initiated debugging. Col. 65: 49, Javascript

***Conclusion***

15. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

16. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Note: JAVA Debug Interface definition from http://java.sun.com is attached.
The JAVA Debug Interface (JDI) is a high level JAVA API providing information useful for debuggers and similar system needing access to the running state of a (usually remote) virtual machine. Bogle disclosed a debugger and access to the running state of a virtual machine.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mary Steelman, whose telephone number is (571) 272-3704. The examiner can normally be reached Monday through Thursday, from 7:00 AM to 5:30 PM If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wei Zhen can be reached at (571) 272-3708. The fax phone number for the organization where this application or proceeding is assigned: 571-273-8300.

Any inquiry of a general nature or relating to the status of this application should be directed to the TC 2100 Group receptionist: 571-272-2100.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Mary Steelman

02/21/2007

Primary Examiner